



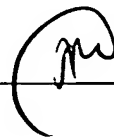
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,334	09/24/2003	Yu-Tung Huang	38699-8035US	5674
25096	7590	09/21/2005	EXAMINER	
PERKINS COIE LLP			WILLIAMS, ALEXANDER O	
PATENT-SEA				
P.O. BOX 1247			ART UNIT	PAPER NUMBER
SEATTLE, WA 98111-1247			2826	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/671,334	Applicant(s) HUANG ET AL. 	
	Examiner Alexander O. Williams	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-9,11-15,17-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-9,11-15,17-19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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Serial Number: 10/671334 Attorney's Docket #: 38699-8035US

Filing Date: 9/24/2003;

Applicant: Yu-Tung Huang

Examiner: Alexander Williams

This application is a divisional of serial # 09/275815, filed 3/25/1999, now U.S. Patent # 6,642,611, issued 11/4/03.

Applicant's Amendment filed 7/13/05 to the election without of Group I (claims 1 to 21), filed 7/15/04, has been acknowledged.

Claims 5, 6, 10, 16, 20 and 22-33 have been canceled.

The disclosure is objected to because of the following informalities: The divisional application information should be updated.

Appropriate correction is required.

As to the buffer layer being either a conductive or insulative layer, the cross-sectional views in the drawings are not correctly or acceptably cross hatched. Without the correct cross-hatched views, the drawings are confusing and not easy to comprehend without a direct layer-for-layer association with the specification. Applicant is directed to MPEP § 608.02 and specifically, the table at page 600-51 (Rev 14, Nov. 1992) of the MPEP for help in correcting the drawings.

Claims 2, 4, 9, 13, 15 and 19 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 13, it is unclear how an aluminum substrate is used and connected. If aluminum is selected how is it not shorted?

In claims 4 and 15, it is unclear how if the substrate is aluminum substrate is selected, how is the buffer layer and substrate not shorted when the buffer layer is conductive? Drawing show that these layers are insulative.

In claims 9 and 19, "said fastening face of said edge of said plurality of electronic devices" lack antecedent basis.

Any of claims 2, 4, 9, 13, 15 and 19 not specifically addressed above are rejected as being dependent on one or more of the claims which have been specifically objected to above.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 3, 7, 8, 9, 12, 13, 14, 17, 18 and 19, **insofar as some of them can be understood**, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Worp et al. (U.S. Patent # 5,136,366) in view of Applicant's Prior Art figure 1B.

As to claim 1 and similar claim 12, Worp et al. (figures 1 to 5) specifically figure 5 show a package assembly for an electronic device, comprising: a substrate **560** having a first surface with a first plurality of contact pads (**shown but not labeled**) and a second plurality of contact pads (**shown but not labeled**), and a buffer layer **545,549** (**see column 3, line 65 to column 4, line 39**) between said substrate and said electronic device, and a surface of said electronic device having electrodes being opposite to said first surface of said substrate, said buffer layer having an opening to expose said first plurality of contact pads, wherein said buffer layer has a first part with a first density and a second part with a second density, said first density greater than said second density,

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wherein said second part of said buffer layer surrounds the edge of said electronic device and said first part of said buffer layer is configured with said electronic device and said first part of said buffer layer functions as a self-planarization buffer between said electronic device and said substrate for increasing the hermeticity thereof. Worp et al. (figures 4 and 5) fail to explicitly show a second surface with a plurality of connection pads, and a plurality of via holes connecting said first plurality of contact pads and said plurality of connection pads. However, it would be obvious to one of ordinary skill in the art that the contact pads are further connected through the substrate to an external connection.

Applicant Prior Art figure 1B show a package assembly for an electronic device, comprising: a substrate **220** having a first surface with a first plurality of contact pads **(shown but not labeled)** and a second plurality of contact pads **(shown but not labeled)**, a second surface with a plurality of connection pads (shown but not labeled), and a plurality of via holes (metal traces within the substrate) connecting said first plurality of contact pads and said plurality of connection pads for the purpose of providing electrical connection to external devices.

2. The package assembly in claim 1, Worp et al. show wherein the material of said substrate is selected from the group consisting a ceramic substrate **(see column 3, lines 28-46)**.

7 and 17. The package assembly in claims 1 and 12, Worp et al. show where a conductive layer (the electrode) is formed on said electronic device.

8 and 18. The package assembly in claim 1 or 12, Worp et al. show wherein said buffer layer has a thickness of 30-200 microns. Note that the specification contains no disclosure of either the critical nature of the claimed dimensions or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the Applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

9. The package assembly in claim 1, Worp show wherein said fastening face of said edge of said electronic device and said buffer layer has a corner.

19. The package assembly in claim 12, Worp show wherein said fastening faces of said edge of said plurality of electronic devices and said buffer layer have a corner respectively.

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Therefore, it would have been obvious to one of ordinary skill in the art to use the teaching of Applicant's Prior Art figure 1B to modify Worp et al.'s device substrate for the purpose of providing electrical connection to external devices.

Claims 4, 11, 15 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Worp et al. (U.S. Patent # 5,136,366) in view of Applicant's Prior Art figure 1B and further in view of Fukihura (U.S. Patent # 5,150,748).

The combination show the claimed invention as detailed above, but fail to explicitly show wherein said electronic device is a surface acoustic wave device

Fukiharu is cited for showing a surface acoustic wave device. Specifically, Fukiharu (figures 1 and 2) discloses a package assembly for an electronic device, comprising: a substrate 11 having a first surface with a first plurality of contact pads 4-1 and a second plurality of contact pads 4-2; a second surface with a plurality of connection pads 10-1,10-2, and a plurality of via holes 9-2,9-1 connecting said first plurality of contact pads and said plurality of connection pads; a second surface with a plurality of connection pads, and a plurality of via holes connecting said first plurality of contact pads and said plurality of connection pads and wherein said electronic device is a surface acoustic wave device 1 for the purpose of being capable of electrically shielding the SAW element against an external electric field while design to have a small volume.

11 and 21. The package assembly in claims 1 or 12, Fukiharu (figure 5) show wherein said electronic device is a surface acoustic wave device 1.

4 and 15. The package assembly in claim 12, Fukihura (figure 5) show wherein said buffer layer is conductive 32,21-2.

Therefore, it would have been obvious to one of ordinary skill in the art to use the teaching of Fukihura's SAW device for the combination device for the purpose of being capable of electrically shielding the SAW element against an external electric field while design to have a small volume.

## Response

Applicant's arguments filed 7/13/05 have been fully considered, but are moot in view of the modified grounds of rejections detailed above.

The insertion of Applicant's additional claimed language, for example, "in claim 1 and 12" cause for further search and consideration to make this action final.

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Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

The listed references are cited as of interest to this application, but not applied at this time.

Field of Search	Date
U.S. Class and subclass: 257/778,680,774,772,779,737,734,738,690,691,696,698,6 68,787,784,786,700,701,758,783 310/348,313 R,340,344 174/260,261 361/760,772,777 385/14,49,91 333/133,193	9/13/04 4/8/05 9/15/05
Other Documentation: foreign patents and literature in 257/778,680,774,772,779,737,734,738,690,691,696,698,6	9/14/04 4/8/05 9/15/05

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68,787,784,786,700,701,758,783 310/348,313 R,340,344 174/260,261 361/760,772,777 385/14,49,91 333/133,193	
Electronic data base(s): U.S. Patents EAST	9/14/04 4/8/05 9/15/05

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander O Williams whose telephone number is (571) 272 1924. The examiner can normally be reached on M-F 6:30-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272 1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AOW  
9/15/05



Primary Patent Examiner  
Alexander O. Williams